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10/583,867

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Aviv Tzidon

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49443 7590 10/22/2010
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EXAMINER

VALENTIN, JUAN D

ART UNIT

PAPER NUMBER

2877

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/583,867 | Applicant(s) TZIDON ET AL. | |
| | Examiner JUAN D. VALENTIN | Art Unit 2877 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>06/21/2006, 07/01/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Regarding claims 42, 43, 45, and 49, the phrase "adapted to" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

2. Claims 48-56 and 64-72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 48 and 64, applicant has claimed further comprising at least one off board beacon", however it is unclear from the claim language if this beacon is different from the beacon disclosed in the preamble of independent claims 40 and 59 from which these claims respectively depend. The beacon disclosed in the preamble is not disclosed as on board or off board, so it is not known if applicant is attempting to claim two different and spatially separated beacons or rather a single beacon wherein the initial beacon described in the preamble of independent claims 40 and 59 is being further limited to an off board beacon? Claims 49-56 and 65-72 depend from the rejected claims 48 and 64 respectively and therefore are rejected for the same reasons as shown above.

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Further regarding claims 49-56 and 65-72, the applicant claims "wherein said at least one beacon", however as shown above, it is unclear exactly how many beacons are attempting to be claimed? Is the "at least one beacon" the beacon disclosed in the preamble of independent claims 40 and 59, or is it referring to the claimed "at least one off board beacon", or finally, is it referring to both?

For the purposes of examination, any prior art showing a single off board beacon shall be deemed to read on the invention as claimed.

3. Claims 56 and 72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has claimed "to allow determination of their relative direction" (emphasis added), it is not clear what "their" is referring to. Is it the optical characteristics direction? The beam direction? The vehicle direction? The claim not being properly searched, therefore examination on the merits has been precluded until applicant has amended the claims to clearly reflect what is being claimed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 40-45, 48-50, 54, 55, 59-66, and 70-71 are rejected under 35 U.S.C. 102(b) as being anticipated by Bouzitat et al. (USPN 2,677,820 A1, hereinafter Bouzitat).

With respect to **claim 40**, Bouzitat in conjunction with Figs. 12 and 13 discloses, an automated positioning system for determining the angular position of a vehicle 83 with respect to a predetermined path (OX, Fig. 10, col. 14, lines 44-52), using at least one beam sweeping (oscillating) across at least a sector (col. 13, lines 53-62, col. 13, line 70-col. 14, line 2), said beam generated by at least one beacon (O) whose position relative to the predetermined path is known (col. 11, lines 6-14, col. 13, lines 63-65), the system comprising at least one electro-optical sensor (A, B, C) onboard the vehicle for detecting said at least one beam, and a logic circuitry (Fig. 13) on board the vehicle for determining the angular position of the vehicle with respect to the predetermined path (col. 10, line 73-col. 14, line 67).

With respect to **claim 41**, Bouzitat further discloses wherein the logic circuitry comprises a processor (receiving equipment) (col. 14, lines 17-43).

With respect to **claims 42, 43, and 45**, Bouzitat clearly discloses the claimed structure, the logic circuitry and the at least one electro-optical sensor, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

With respect to **claim 44**, Bouzitat further discloses wherein said at least one electro-optical sensor comprises two sensing elements (Fig. 12, A, B, C).

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With respect to **claims 48 and 49**, Bouzitat further discloses at least one off board beacon (O) whose position relative to the predetermined path is known for generating said at least one beam sweeping across at least a sector back and forth (col. 13, line 53-col. 14, line 52).

With respect to **claim 50**, Bouzitat further discloses wherein the beacon is a single beacon (Fig. 12).

With respect to **claims 54 and 55**, Bouzitat further discloses wherein the beacon is characterized by an optical characteristic such as modulation frequency (col. 13, line 53-col. 14, line 52).

With regard to **claims 59-66, and 70-71**, the method is taught by the functions set forth with regards to the apparatus claims 40, 42-45, and 54-55 respectively, as rejected above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 46, 47, 57, 58, 73, and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouzitat in view of Miles (USPN 4,277,170).

Bouzitat substantially teaches the claimed invention except that it fails to show the use of a wavelength filter or feedback control signals to control vehicle movement. Miles shows that it is known to provide both wavelength filtering (**claims 46 and 47**) and feedback control signals (**claim 57**) to control vehicle movements (abstract) for laser beacon and optical detector system.

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It would have been obvious to someone of ordinary skill in the art to combine the device of Bouzitat with the spectral filtering and movement control feedback system of Miles for the purposes of providing collision avoidance with another aircraft (Miles, abstract).

With regard to **claim 58**, Bouzitat discloses the beacon detector system on an aircraft, but is silent to the fact of whether or not the vehicle is an unmanned aircraft. The idea of placing the system of Bouzitat on an unmanned aircraft is neither unique nor novel. Common sense dictates that it would be well within the skill of one of ordinary skill in the art to take the system as taught by Bouzitat and place it on either a manned or unmanned aircraft.

With regard to **claims 73 and 74**, the method is taught by the functions set forth with regards to the apparatus claims 57 and 58 as rejected above.

6. Claims 51-53 and 67-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouzitat in view of Dyke (USPN 4,700,301 A1).

With respect to **claims 51-53**, Bouzitat substantially teaches the claimed invention except that it fails to show the use of two beacons and/or show two synchronized beams sweeping in opposite directions across the detector. Dyke shows that it is known to provide two beacons (**claim 51**, Fig. 8, ref. 2) and show two synchronized beams (**claim 52**, each beacon 2 emits a beam) sweeping in opposite directions across the detector for an aircraft guidance system. It would have been obvious to someone of ordinary skill in the art to combine the device of Bouzitat with the multiple beacon system of Dyke for the purposes of providing vehicle steering guidance (Dyke, abstract). It is obvious to someone of ordinary skill in the art at the time of the

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claimed invention that the beams would rotate in synchronization for the purposes of insuring an exact location fix on the vehicle being steered.

Dyke clearly teaches the use of two rotating beams however is silent with respect to the direction in which the beams are swept across the detector, it is obvious to someone of ordinary skill in the art at the time of the invention was made to find the optimum beam rotation direction, since it has been held that discovering an optimum value or workable range of a result effective variable involves only routine skill in the art.

With regard to **claims 67-69**, the method is taught by the functions set forth with regards to the apparatus claims 51-53 as rejected above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUAN D. VALENTIN whose telephone number is (571)272-2433. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory J. Toatley, Jr./
Supervisory Patent Examiner, Art Unit 2877

Juan D Valentin II
Examiner
Art Unit 2877

/JDVVII/
October 14, 2010